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DEPARTMENT
OF
INDUSTRIES AND LABOUR

QUARTERLY BULLETIN

ELECTRICAL

INSPECTION

BRANCH



APRIL - 1957

SECOND EDITION SECTION 70

The second edition of Section 70, Interim Revisions to the Sixth Edition of the Code, has recently been published.

The revisions contained in this pamphlet are those which have been processed since the publication of the Sixth Edition of the Code, and include all of the revisions previously published in the first edition of Section 70 together with several later revisions.

A supply of the second edition of Section 70 has now been obtained by this Branch, and copies are available from any of our District Electrical Inspection Offices at 40 cents each. When ordering copies of this article through the mail your request should be sent directly to this office accompanied by the necessary remittance.

SUBMISSION OF PERMIT APPLICATIONS

There have recently been several reported instances of electrical work being undertaken prior to the submission of a covering permit application, and in some cases this has resulted in considerable inconvenience to the customer in obtaining a power supply connection.

In this regard reference should be made to Paragraph 31 (a) of the Regulations Governing Electrical Permits and Inspection Fees which states, in part, "It shall be unlawful, excepting in those districts and areas set forth in Clause 38 (b) of these regulations, for any person to construct, install or alter any electrical work in or upon any premises until he shall have made application in writing for a permit therefore from the Electrical Inspection Department".

The commencement of any electrical work prior to submission of a permit application is a violation of the above regulation and, in addition, usually results in difficulty in obtaining a power connection when it is required.

ACCIDENTS AND FIRES INVESTIGATED BY PROVINCIAL INSPECTION BRANCH

During 1956 the following fatal accidents were investigated by Inspectors of the Provincial Electrical Inspection Office.

February 3rd, 1956. - A dragline operating adjacent to a 66,000 volt line during the laying of 36" sewer pipe contacted the power line causing electrocution of a construction worker who was engaged in attaching the dragline hook to the sewer pipe at the time of the contact.

**ACCIDENTS AND FIRES INVESTIGATED BY
PROVINCIAL INSPECTION BRANCH - CONTINUED.**

April 16th, 1956. - During the installation of communication conductors on a pole line carrying 13 KV power conductors, the communication lines were inadvertently brought into contact with the power conductors. This resulted in the electrocution of a lineman.

June 22nd, 1956. - A member of a survey crew contacted a 7620 volt rural line with a surveyors metal rod while taking levels adjacent to a road. The victim suffered severe shock and burns and a subsequent medical report indicated that death was caused by asphyxiation.

July 12th, 1956. - A clothes line attached to a metal covered trailer coach became energized at 115 volts due to the nails securing the outer sheathing contacting the interior wiring. A tractor operator contacted the clothes line while driving his machine underneath it and was electrocuted.

July 25th, 1956. - A truck driver while working adjacent to ungrounded electrical equipment operating at 440 volts received a severe electrical shock and burns, which proved fatal, as a result of contact with the equipment.

August 14th, 1956. - While playing near her fathers residence A THREE YEAR OLD GIRL was electrocuted through contact with an unattached grounding conductor for the 115 volt interior wiring system.

October 4th, 1956. - When a power line pole supporting series street lighting conductors was broken by a car the conductors fell to the ground.

In attempting to remove the fallen conductors from the street, a lineman was electrocuted.

In addition to the above fatal accidents some 67 non-fatal accidents were investigated during 1956. In many instances the accidents resulted in serious and permanent injury to the persons involved.

Also, 34 fires of electrical origin were investigated by the Inspectors of this Branch during the year.

**CLEARANCE BETWEEN GAS METERING
EQUIPMENT AND STANDARD SERVICE EQUIPMENT**

In view of the possibility of the accumulation of explosive vapours at gas metering equipment, and to permit ready access and working space at the equipment involved, standard service equipment should not, if practicable, be installed adjacent to gas metering equipment.

CLEARANCE BETWEEN GAS METERING EQUIPMENT AND STANDARD EQUIPMENT - CONTINUED.

In residential installations a clearance of at least two feet should be provided between gas metering equipment and service equipment. This same clearance is required for commercial installations where gas metering equipment of the normal size and design is used. When larger than normal gas metering equipment is used the spacings should be increased and, where possible, separate rooms provided for the electrical and gas equipment.

In cases where it becomes necessary to mount the electrical equipment in the vicinity of gas equipment, the clearances to be provided are to be reviewed with the Inspection Branch before the installation is commenced.

GROUPING OF MOTORS UNDER A SINGLE SET OF OVERCURRENT DEVICES

Requests are frequently received to connect a group of motors supplied with magnetic switches under a single set of overcurrent devices. It should be noted that Section 28 of the Canadian Electrical Code requires that motors be protected by overload devices approved for group fusing when they are supplied from a branch circuit supplying two or more motors if the rating or setting of the overcurrent devices exceeds 15 amperes. To date no magnetic switches have received C. S. A. approval for group fusing and they are not to be used in circuits protected at more than 15 amperes and serving two or more motors not having individual overcurrent protection.

When overload devices specifically approved for group fusing are installed in a branch circuit supplying a group of motors the rating of the fuse protecting the circuit must not exceed the maximum capacity as indicated on the smallest capacity of overload device used.

PROTECTION OF CONCEALED NON-METALLIC SHEATHED CABLE INSTALLATIONS

We have recently received a number of reports of damage to non-metallic sheathed cables where run horizontally behind kitchen walls as a result of nails being driven into the cable during the mounting of cupboards on the wall surface.

In view of this non-metallic sheathed cable installed horizontally in walls in such places as kitchens, bathrooms, etc., and subject to more than normal risk of mechanical damage, is to be effectively protected from injury from driven nails where it passes through the wooden members of the structure. As an alternative to this, the non-metallic sheathed cables may be run vertically in such instances.